

	L #	Hits	Search Text	DBs	Time Stamp
1	L1	68958	(plasma corona glow adj discharge) same (O2 "O.sub.2" oxygen ozone O3 "O.sub.3" oxidati\$3 oxidiz\$4 air)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:28
2	L2	196	(427/491).CCLS.	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:23
3	L3	767	(427/536,539).CCLS.	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:23
4	L4	1442	(427/244-246).CCLS.	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:23
5	L5	404	(427/412.3,412.5).CCLS.	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:24

SN09/784,057

	L #	Hits	Search Text	DBs	Time Stamp
6	L6	920	2 or 3	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:24
7	L7	1839	4 or 5	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:25
8	L8	0	4 and 5 and (1 or 3)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:26
9	L9	48	4 and (1 or 3)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:28
10	L10	53	5 and (1 or 3)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:28

	L #	Hits	Search Text	DBs	Time Stamp
11	L11	48415	(plasma corona glow adj discharge)with (O2 "O.sub.2" oxygen ozone O3 "O.sub.3" oxidati\$3 oxidiz\$4 air)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:28
12	L12	35	4 and (11 or 3)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:28
13	L13	46	5 and (11 or 3)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:29
14	L14	11971	(polyolefin polyethylene polypropylene polyvinylchloride PVC polyvinylidenechloride PVDC polyvinylflouride PVF polyvinylideneflouride PVDF polytetrafluoroethylene PTFE terafluoroethylene) and 1	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:34
15	L15	8023	(polyolefin polyethylene polypropylene polyvinylchloride PVC polyvinylidenechloride PVDC polyvinylflouride PVF polyvinylideneflouride PVDF polytetrafluoroethylene PTFE terafluoroethylene) and 11	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:36

	L #	Hits	Search Text	DBs	Time Stamp
16	L16	63	(12 or 13) and 14	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:37
17	L17	20	16 and membrane	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:37
18	L18	20	16 and graft\$4	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:38
19	L19	34	17 or 18	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/12/15 09:38

L20 (42) 15 + (2 or 3) + membrane  
 L21 (68) 15 + (2 or 3) + graft\$4  
 L22 (87) 20 or 21  
 L23 (110) 22 or 19  
 L24 (23) 20 + 21  
 → L25 (4) 24 and 19  
 L26 (53) 24 or 19  
 → L27 (49) 26 not 25

L30 29 + 28 (23)  
 L29 27 + styrene → (23)  
 L28 27 + \$ styrene → (23)  
 ↑ incomplete slow overload

25

	Document ID	Issue Date	Title	Current OR	Inventor
1	US 5773098 A	19980630	Applying a fluoropolymer film to a body	427/490	Thomas, Thomas Ronald
2	US 5679264 A	19971021	Gas plasma treated porous medium and method of separation using same	210/767	Gsell, Thomas Charles
3	US 5443743 A	19950822	Gas plasma treated porous medium and method of separation using same	210/767	Gsell, Thomas C.
4	US 5229172 A	19930720	Modification of polymeric surface by graft polymerization	427/536	Cahalan, Patrick T. et al.

(B) Synthetic resins ... PE, PP ...

(B) The gas used to treat ... NO, N<sub>2</sub>O, O<sub>2</sub>, air ...

(D) The filter assembly ...

(D) A part of the PE ...

Cent.

(Ab) - graft copolymers on inorganic polymers

(B) Activated grafting ...

→ polyolefins, fluoropolymers - not good for active graft

L27

50-50

	Document ID	Issue Date	Title	Current OR	Inventor
L30-1 1	US 200200096 04 A1	20020124 7/28/00	Plasma-deposited coatings, devices and methods	428/450	Zamora, Paul O. et al.
2	US 200100512 77 A1	20011213	Medication device with protein stabilizing surface coating	428/457	Van Antwerp, William Peter et al.
3	US 200100214 21 A1	20010913 8/8/99	Non-cracking hydrophilic polyether sulfone membranes	427/491	Witham, Michael J. et al.
4	US 6465050 B2	20021015	Non-cracking hydrophilic polyether sulfone membranes	427/491	Witham, Michael J. et al.
L30-2 5	US 6436481 B1	20020820	Method of producing a reactive coating by after-glow plasma polymerization	427/488	Chabrecek, Peter et al.

	Document ID	Issue Date	Title	Current OR	Inventor
L30 #3 6	US 6387379 B1	20020514	Biofunctional surface modified ocular implants, surgical instruments, medical devices, prostheses, contact lenses and the like	424/400	Goldberg, Eugene P. et al.
pull L30 #4 7	(A) polyO+ vinyl poly primer w/ silane US 6368677 B2 eff. 4/12/94	20020409	Method of priming polyolefin articles for coating	(B) US Pat. 5,384,192 → poly (hydro Styrene) adhesive primer (B) priming plants → 427/534	Hubbard, Michael A. et al.
DIV 8	(B) thermally stable... PO=PE, PP... (B) poly, other... w/ silane... to improve wettability or corrosion or chemically oxidized	US 6261679 B1 20010717	Fibrous absorbent material and methods of making the same	428/317.9	Chen, Fung-jou et al.
L30 #5 9	US 6254994 B1	20010703	Method of priming polyolefin articles for coating	428/446	Hubbard, Michael A. et al.
10	US 6203850 B1	20010320	Plasma-annealed porous polymers	427/245	Nomura, Hiroshi
11	US 6169127 B1	20010102	Plasma-induced polymer coatings	523/106	Lohmann, Dieter et al.

	Document ID	Issue Date	Title	Current OR	Inventor
	(L30 #6) (D) Ink-jet pen - had not. → PE, PP, PS		Ink-jet recording head and a production method of the same	427/333	Ito, Takeshi et al.
12	US 6123994 A	20000926		cl. 7-10	
	(D) the surface... activate plasma, O <sub>3</sub> , corona. (D) As plastic after plasma - O <sub>2</sub> , N <sub>2</sub> .				
13	US 6112908 A	20000905	Membrane laminates and methods for their preparation	210/506	Michaels, Alan Sherman
	PVDF, PTFE, PE, PP, PS				
14	(L30 #7) (B) the present inv... membranes, both F & non F. PD... B str. US PTFE, PE, PP, PS. cl. H <sub>2</sub> plasma (CH <sub>4</sub> , CO, CO <sub>2</sub> )	20000502	Process of plasma treating polymer materials	427/491	Razavi, Ali
15	(L30 #8) (B) the poly plastic sub... PD = PE, PP, PTFE, PS. membrane & graft, poly of activated films. Cl. 1 - activate - graphite - SO <sub>2</sub> plasma treat	20000208	Method of making a blood-compatible antimicrobial surface	424/411	Anders, Christine et al.
	cal 5 - table 2 (UV, Ar-plasma, corona, flame, gamma rays, EB)				
16	US 5993917 A	19991130	Method and apparatus for improving wettability of foam	427/536	Pan, Alfred I-Tsung et al.



	Document ID	Issue Date	Title	Current OR	Inventor
17	US 5935646 A	19990810	Molecular sieving silica membrane fabrication process	427/244	Raman, Narayan K. et al.
18	US 5893974 A	19990413	Microfabricated capsules for immunological isolation of cell transplants	210/483	Keller, Christopher G. et al.
19	US 5849368 A	19981215	Process for hydrophilicization of hydrophobic polymers	427/536	Hostettler, Fritz et al.
20	US 5843789 A	19981201	Method of analysis of genomic biopolymer and porous materials for genomic analyses	436/164	Nomura, Hiroshi et al.

(D) Materials ... PO = PE, PP, PVDH, PVD, PTFE

(D) The glass described ... internal ketch plasma graft

X plasma purg, then graft

	Document ID	Issue Date	Title	Current OR	Inventor
21	(L30 #7) (D) Smith et al. (AF) Smith et al. the dep poly of the EB US 5804263 A	19980908	DO. PE, PP... PS... PVE, PTFE... Combined plasma and gamma radiation polymerization method for modifying surfaces	428/34.7	Goldberg, Eugene P. et al.
22	US 5770275 A	19980623	Molecular sieving silica membrane fabrication process	427/535	Raman, Narayan K. et al.
23	US 5709909 A	19980120	Filler paste for use in basecoats for coating polyolefin substrate s, basecoats, and process for the direct coating or polyolefin substrate s	427/407.1	Leibfarth, Frank et al.

	Document ID	Issue Date	Title	Current OR	Inventor
24	US 5691005 A	19971125	Manufacturing method of a separator for a lithium secondary battery and an organic electrolyte lithium secondary battery using the same separator	427/508	Morigaki, Kenichi et al.
25	US 5662960 A	19970902	Process for producing slippery, tenacious ly adhering hydrogel coatings containing a polyurethane-urea polymer hydrogel commingle d with a poly (n-vinyl pyrrolidone) polymer hydrogel	427/2.3	Hostettler, Fritz et al.

pull

(A) microarray Po  
(P) A mic... PE membrane  
25 DA " plasma oxide

(L35 #10) Sub (PO-PP, PE AS...  
- Gplasma treated  
- coat w/ hydrogel poly

	Document ID	Issue Date	Title	Current OR	Inventor	
(L30 #12)	26	US 5576072 A	19961119	Process for producing slippery, tenaciously adhering hydrogel coatings containing a polyurethane-urea polymer hydrogel commingled with at least one other, dissimilar polymer hydrogel	427/532	Hostettler, Fritz et al.
(L30 #12)	27	US 5523118 A	19960604	Method of coating microporous membranes	427/208.8	Williams, Gregory D.
	28	US 5516561 A	19960514	Applying a fluoropolymer film to a body	427/490	Thomas, Thomas R.
29	US 5514413 A	19960507	Process for producing composite membranes	427/244	Van't Hof, Jacob A. et al.	
(L30 #13)	30	US 5500251 A	19960319	Process for coating low energy surfaces	427/322	Burgoyne, Jr., William F. et al.



	Document ID	Issue Date	Title	Current OR	Inventor
36	US 5080924 A	19920114	Method of making biocompatible, surface modified materials	427/2.24	Kamel, Ihab et al.
37	US 5069926 A	19911203	Method for modifying the surface of a polymer article	427/491	Iwata, Hiroo et al.
38	US 4980235 A	19901225	Process for preparing non-porous membrane layers	428/421	Scheer, Albert V. D. et al.
39	US 4873037 A	19891010	Method for preparing an asymmetric semi-permeable membrane	264/49	Chau, C. C. et al.
40	US 4828871 A	19890509	Method of providing shaped polymeric articles with improved receptivity to organic coatings	427/533	Strobel, Mark A. et al.

(L30 #12)

(B) The present invention relates to a method of modifying the surface of a polymer article by plasma treatment.

(AB) poly-contrast post plasma treatment

(L30 #12)

(D) Given the criteria... Method for preparing an asymmetric semi-permeable membrane... PE/SBS...

switching polys... styrene, PO, PE, PP, PS

poor

(L30 #12)

(AB) PP... Method of providing shaped polymeric articles with improved receptivity to organic coatings

	Document ID	Issue Date	Title	Current OR	Inventor
41	US 4692347 A	19870908	Method of interiorly coating tubing	427/491	Yasuda, Hirotsuga K.
42	US 4675213 A	19870623	Hydrophilized membrane of porous hydrophobic material and process for preparing the same	427/244	Yamamori, Hisayoshi et al.
43	US 4663227 A	19870505	Hydrophilized membrane of porous hydrophobic material and process for preparing the same	428/315.7	Yamamori, Hisayoshi et al.
44	US 4576859 A	19860318	Radio wave shielding materials and a method of producing the same	428/311.1 1	Oyachi, Tomio et al.
45	US 4563388 A	19860107	Polyolefin substrate coated with acrylic-type normally tacky and pressure-sensitive adhesive and a method of making same	428/304.4	Bonk, Thomas J. et al.

	Document ID	Issue Date	Title	Current OR	Inventor
<i>L30 #20</i>					
<i>46</i>	US 4429039 A	19840131	Photographic element	430/534	Ochiai, Takeji
<i>L30 #21</i>					
<i>47</i>	US 4424240 A	19840103	Polymers adherent to <u>polyolefins</u>	427/393.5	Kielbania, Jr., Andrew J.
<i>L30 #22</i>					
<i>48</i>	US 4337111 A	19820629	Method of obtaining strong and durable adhesion to rubber through chemical covalent bonds	156/307.5	Kauffman, Karl C. et al.
<i>last</i>					
<i>L30 #23</i>					
<i>49</i>	US 4128426 A	19781205	Process for subbing photographic hydrophobic films	427/536	Ohta, Hideyasu et al.

*Sub PO = PE*

*(D) When a hydrophobic surface is exposed to water*  
*(D) Inadequate subbing PS*